Introduction

As part of the reauthorization of MOR-EV funding, all aspects of the program were evaluated for potential improvement. Staff evaluated setting a Manufacturer Suggested Retail Price (MSRP) cap for MOR-EV rebates and solicits feedback. The goal of the MOR-EV program is to maximize the deployment of ZEVs in the state to reduce greenhouse gases (and other pollutants). However, people purchasing luxury vehicles will likely do so with or without a rebate. A rebate for these residents may not make the difference between buying a ZEV or a conventional gasoline engine car.

We believe that it is important to point out that any price cap would eliminate one of the most expensive and popular ZEV cars, the Tesla[1]. The Tesla is the second most rebated ZEV in MA, it provides significant high mileage fueled by electricity (an EPA estimated 265 mile total electric range) and thereby reduces CO2 and other air pollutants to a greater extent than other vehicles. Owners of the Model S gave it a 99 out of 100 possible points, virtually unprecedented in 2013 *Consumer Reports'* owner satisfaction survey. Many consider the Tesla as the most recognizable premium ZEV that gets faster, smarter and higher performance with each new software upgrade and model year. Discussions with a small number of Tesla owners revealed that the rebate was very important to them as they evaluated funding their vehicle's down payment.

Exception recommended: Another concern we discussed is the need to encourage adoption and diffusion of vehicle with new innovations (fuel cell electric vehicles for example). New technology may come on the market with small volume production contributing to vehicle costs greater than a cap limit. For this reason, we also suggest that new models with an innovative component and are not simply luxury vehicles be reviewed by DOER and a recommendation be made to the Secretary of the Executive Office of Energy and Environmental Affairs (EOEEA) who will determine if such vehicle should be exempt from the MSRP cap for a period of time.

Recommendation

We recommend a MSRP cap of $60,000 for vehicles to be eligible for rebate. New vehicle types may petition the DOER to determine if there is a benefit to allow an exemption for up to the first three years of production due to the vehicle design's environmental and energy benefits. The DOER will make a finding to the Secretary of EOEEA who will make the final determination. This recommendation should be discussed with the ZEV Commission for input.

Background Information

Other state rebate programs: Two of the 7 other states in our ZEV MOU have considered or implemented a MSRPcap:

- CARB has considered a MSRP cap for several years without adopting one ($60,000 considered)
- Connecticut "CHEAPR" rebate has a MSRP cap of $60,000.

Tesla Information: In 2014, the Tesla Model S accounted for 14.5% of the national EV market. Tesla Model S buyers are primarily high income, pay cash and did not seriously consider

[1] In April 2015, for the first time, the Tesla Model s outsold the Nissan Leaf - 1,900 for the Model S versus 1,553 for the Leaf according to HybridCars.com and Baum & Associates.

purchasing another vehicle.[2] Teslas have been a commonly rebated vehicle in California since 2013. In 2014, 13% of vehicles rebated were Tesla and in 2015 that percentage exceeds 18%[3]. As noted above, CARB has considered an MSRP cap for several years without adopting one. Tesla does have manufacturing plants in that state.

In *Massachusetts*, the MOR-EV data shows the following distribution of rebates (in order of vehicle price). As of August 7, 239 rebates ($593,500 total rebate dollars) were given for the 6 rebated models above $60,000 (the Cadillac ELR, BMW i8, 3 Tesla models and Porsche Cayenne S E-Hybrid). In addition, the Porsche 918 Spyder and Porsche Panamera S E-Hybrid are eligible models above $60,000, but neither model has been rebated. Tesla vehicles are 20.7% of the rebated vehicles in MA.

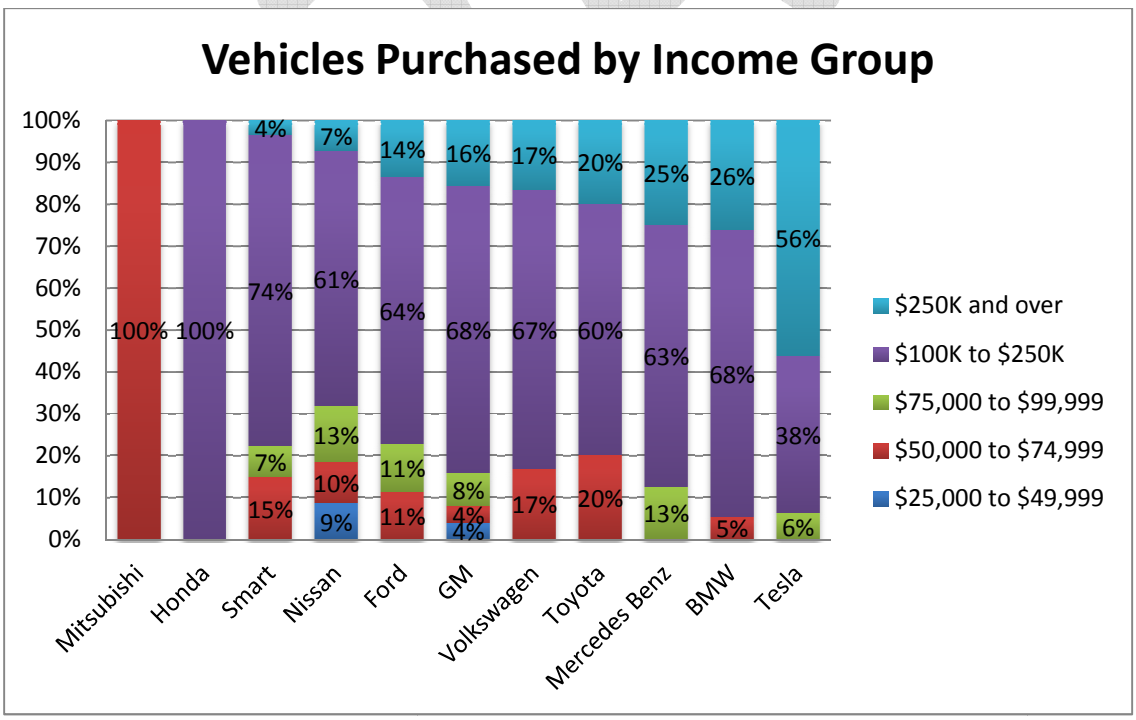
Vehicle Model	Average Purchase Price	Estimated MSRP from Web	MOR-EV Rebates (8/7/15)
Zero DS	$14,580	$11,995	1
Smart Electric Fortwo Coupe	$17,296	$25,000	82
Smart Electric Fortwo Cabriolet	$19,491	$28,000	13
Mitsubishi i-MiEV	$22,413	$22,995	3
Honda Fit EV	$29,915	$36,625	3
Nissan LEAF S	$30,319	$29,010	99
Volkswagen e-Golf	$31,361	$35,445	43
Toyota Prius Plug-in Hybrid	$31,616	$29,990	10
Ford C-MAX Energi	$32,542	$31,770	66
Ford Focus Electric	$32,714	$29,170	19
Nissan LEAF SV	$33,171	$32,100	68
Nissan LEAF SL	$34,378	$35,120	62
Chevrolet Volt	$35,161	$34,345	187
Mercedes-Benz B-Class Electric Drive	$35,459	$41,450	30
Ford Fusion Energi	$35,615	$34,800	67
BMW i3	$44,544	$42,400	20
BMW i3 REx	$49,417	$46,250	46
Cadillac ELR	$64,504	$75,000	13
Tesla Model S - 60 kWh battery	$82,199	$69,900	18
Tesla Model S - 70 D	$84,265	$75,000	15
Porsche Cayenne S E-Hybrid	$86,176	$76,400	3
Tesla Model S - 85 kWh battery	$105,212	$79,900	186
BMW i8	$148,850	$136,500	4

Average Price <$60,000	$31,176
Average Price of all Rebated Vehicles	$47,878

[2] NAS *"Overcoming Barriers to Deployment of Plug-in Electric Vehicles"*, April 2015.
[3] Center for Sustainable Energy (2015). California Air Resources Board Clean Vehicle Rebate Project, Rebate Statistics. Data last updated July 20, 2015. Retrieved on August 10 from http://energycenter.org/clean-vehicle-rebate-project/rebate-statistics

MA EV Purchases: Program survey response data collected by the MOR-EV program in March examined the types of vehicles purchased by individuals in different income groups. While there is some statistically significant differences it is hard to establish a relationship between any single manufacturer and income group.[4]

Income Range	$25,000 to $49,999	$50,000 to $74,999	$75,000 to $99,999	$100K to $250K	$250K and over	**Total**
Mitsubishi	0	1	0	0	0	**1**
Honda	0	0	0	2	0	**2**
Smart	0	4	2	20	1	**27**
Nissan	7	8	11	50	6	**82**
Ford	0	5	5	28	6	**44**
GM	3	3	6	52	12	**76**
Volkswagen	0	1	0	4	1	**6**
Toyota	0	1	0	3	1	**5**
Mercedes Benz	0	0	1	5	2	**8**
BMW	0	1	0	13	5	**19**
Tesla	0	0	2	12	18	**32**
Total	**10**	**24**	**27**	**189**	**52**	**302**



[4] CSE MOR-EV Income Analysis, March 17, 2015

*Other Considerations: T*hree other changes were considered but are not recommended at this time:

- *Send a signal that full battery EVs are preferred due to their "all-electric miles" to spur development:* Reduce the PHEV+ category for batteries greater than 10kWh powered by electricity and gasoline from $2500 to $1500 level. Only full Battery Electric vehicles would receive the $2500 rebate. This would eliminate the Chevy Volt from the higher rebate amount, and this is the second most highly purchased ZEV. We do not recommend this change at this time in MA given our goal of incentivizing all ZEVs. Such a policy incentive across multiple states might be an effective signal to auto manufacturers to make longer range EVs.

- *Sending an "all inclusive" signal that all EVs are good allowing consumer choice based on individual needs:* Automobile manufacturers suggested that a single rebate amount is less confusing to the public who already exhibits confusion over rebates versus tax credits. We have seen some indications of tax confusion in MA but do not recommend this change as we do want to encourage longer distance travel on electricity by setting a different rebate level and three levels of rebate in one state do not seem too confusing.

- *Eliminating Zero-Emission Motorcycles:* Only one rebate has been requested for zero-emission motorcycles but as these are the cheapest method of transportation, we recommend keeping them eligible for rebates.

Also related: At the request of management, staff is evaluating an EV equity program aimed at increasing penetration of ZEVs into economically disadvantaged communities.